Amendments To The Claims:

Please amend the claims as shown.

1 – 18 (canceled)

19. (previously presented) A method for filling a material separation at a surface of a substrate or a layer, comprising:

filling the material separation by introducing further material with an electrolytic deposition process incorporating an eddy-current probe positioned to generate mechanical excitations in the region around the material separation.

20. (previously presented) The method as claimed in claim 19, wherein the substrate or the layer is electrically connected through an electrolyte to an electrode and a variable current is provided between the substrate or the layer and the electrode.

21. (previously presented) The method as claimed in claim 20, wherein the current is pulsed.

22. (previously presented) The method as claimed in claim 20, wherein the further material includes first and second constituents and the current is varied in a repetitive manner so that deposition conditions are alternately more optimum for the first constituent and then more optimum for the second constituent.

23. (previously presented) The method as claimed in claim 20, wherein at least one ultrasound probe is operated in the electrolyte.

24. (previously presented) The method as claimed in claim 19, wherein the frequency of the eddy-current probe is varied during the method.

25. (previously presented) The method as claimed in claim 24, wherein a depth of penetration into the material separation is set by the frquency.

26. (previously presented) The method as claimed in claim 20, wherein the further material includes material of a same type as the material of the substrate or the layer.

27. (currently amended) The method as claimed in claim 20, wherein the further material ~~includes material of a type similar to the material of the substrate or the layer~~is the same as the material of the substrate or the layer.

28. (previously presented) The method as claimed in claim 19, wherein the material separation is widened in a first method step.

29. (previously presented) The method as claimed in claim 19, wherein a current/voltage pulse is used for the electrolytic deposition, with both positive and negative current/voltage pulses being used.

30. (previously presented) The method as claimed in claim 19, wherein a plurality of repeated current/voltage pulses are combined in a sequence and used for the electrolytic deposition, the sequence of at least two different blocks being used, with a block comprising at least one current pulse.

31. (previously presented) The method as claimed in claim 30, wherein a block is determined by a number of current pulses, pulse duration, interpulse period, current intensity, and pulse shape.

32. (previously presented) The method as claimed in claim 30, characterized in that a block is in each case matched to a constituent of an alloy, in order to boost the deposition of this constituent of the alloy.

33. (previously presented) The method as claimed in claim 19, wherein the further material includes constituents of an alloy of the type MCrAlY resulting in deposition of the alloy wherein M is an element selected from the group consisting of iron, cobalt and nickel.

34. (previously presented) The method as claimed in claim 30, wherein gradients are produced in the material composition within the material separation.

35. (previously presented) The method as claimed in claim 21, wherein a base current is superimposed on the current pulses and/or the interpulse periods.

36-37. (canceled)

38. (previously presented) The method of claim 32 wherein the varying of current in a repetitive manner includes providing current pulses of varied duration and magnitude.

39. (previously presented) The method of claim 38 wherein a base current is superimposed on the current pulses and during periods between pulses.